

TRANSACTIONS

OF THE

NEW YORK SURGICAL SOCIETY.

Stated Meeting, April 27, 1904.

CHARLES L. GIBSON, M.D., in the Chair.

EXCISION OF RECTUM FOR CARCINOMA.

DR. WILLY MEYER presented a man, forty-eight years old, who, when he first came under observation in the summer of 1903, showed all the symptoms of a neoplasm of the rectum. The rectoscope showed a new growth about five inches above the anus; this bled easily, and was typical in appearance of carcinoma.

An operation was proposed, but declined by the patient. He returned some months later, much emaciated; his symptoms were aggravated and the local condition more pronounced. A day was set for the operation, but before its arrival the patient suddenly had an attack of acute intestinal obstruction, with stercoraceous vomiting, and in order to relieve this inguinal colostomy was hurriedly done.

A subsequent examination of the malignant growth in the rectum showed that it was immovable and firmly adherent to the sacrum. This condition usually rendered the outlook of a radical operation unfavorable; but, as the patient and his family were insistent, Dr. Meyer operated by the Kraske method on November 6, 1903. The operation was done in the knee-chest posture, which the speaker said he favored in these cases. After laying open the parts widely, and opening the peritoneum, the growth could be pulled down into view. It could not be brought down far enough, however, to do a resection, and Dr. Meyer thereupon decided to

excise the entire lower rectum and make a sacral anus. He was strongly tempted to close the lower end of the divided gut, leaving it as a blind pouch, and allowing the patient to continue to empty his bowels through the old colostomy wound; but he was restrained from doing this by the presence of a number of hard masses that could be felt above the cut end of the intestine.

Subsequent to the operation, the patient complained of intense pain in the lower bowel. This was so severe that it could not be overcome by even large doses of morphine, and when Dr. Meyer again saw the patient, about twenty hours after the operation, he found that the pain was due to the fact that the sacral anus had become occluded by a large faecal stone. This, with three or four of the same kind appearing later, had to be removed with instruments. Subsequent recovery was uneventful. To-day the patient has, in addition to the sacral anus, his inguinal colostomy wound, which he is anxious to have closed. Dr. Meyer said he would keep the patient under observation, and if, at the end of a year, the outlook was still favorable he would close the colostomy wound and leave the sacral anus.

In reply to a question as to why the knee-chest posture was preferred at the German Hospital in operating on these cases, Dr. Meyer said it had been introduced there by Dr. Lange, and possessed such manifest advantages over the Sims's position that it had been generally resorted to since. The abdomen was supported by a box-like apparatus, while the upper part of the body rested on the pillows. This gave a very good access to the parts. Hæmorrhage is also much lessened. One possible objection to it was that in cases where the rectum had been accidentally opened or torn, the danger of infection was increased by the gravitation of the intestines towards the diaphragm.

CHRONIC CHOLANGEITIS; CHOLEDOCHOTOMY.

DR. WILLY MEYER presented a woman, fifty-four years old, who entered the German Hospital early in October, 1903. She complained of frequent chills, and had been deeply jaundiced for three months. The stools were clay-colored. The patient was very stout, and had a large irreducible ventral hernia.

Operation, October 15, 1903. On account of the pendulous abdomen, the primary incision through the rectus had to be lengthened in the shape of Kehr's "Wellenschnitt." The fundus

of the gall-bladder was found to be covered with omentum. A stone could be felt in the bladder, and could be traced into a distended viscus which seemed to be the lower half of an hour-glass-shaped gall-bladder. Upon aspiration, yellow, non-smelling gall escaped. The fundus was incised and three stones removed. The finger was then passed from the upper strictured section of the gall-bladder into a lower, larger compartment, which extended so far down behind the duodenum that it was at once recognized as the common duct distended to about the size of a large thumb. Two more calculi were found in the strictured portion of the bladder, and, finally, a round stone, evidently situated in the distended papilla. After the removal of these calculi, a sound was easily passed into the duodenum. Palpation of the hepatic duct revealed another faceted stone at its bifurcation.

The hepatic duct was drained and the common duct closed. On account of the poor condition of the patient, the shrunken gall-bladder was left behind after it had been split, its mucosa cauterized, and one part fastened to the abdominal wall. The patient made an uneventful recovery, and had since enjoyed good health.

DR. GIBSON said that all the biliary calculi in Dr. Meyer's case were doubtless from the same source. Yet the assertion had been made that stones that were formed in the biliary duct were of a different make-up from those in the gall-bladder. Biliary duct calculi were not supposed to give rise to serious obstruction; that is, they never reached that size.

EXOSTOSIS BURSATA OF FEMUR.

DR. WILLY MEYER presented a man, twenty-five years of age, who came under his observation with the diagnosis of osteosarcoma of the thigh. Examination showed a hard mass on the inner side of the left femur. It was soft in parts, and on palpation gave a parchment-like feeling. The patient insisted that the swelling had not existed over three months. The tumor was evidently above the epiphysis, and was irregular in contour. Dr. Meyer said he was inclined to regard it as an exostosis bursata of the femur. This diagnosis was practically confirmed by the X-ray, which showed that the shaft of the bone was normal, and that the growth consisted of an irregular mass, with a pedicle connecting it with the femur.

An incision was made over the mass, which was filled with

fluid and clotted blood. Its pedicle, attached to the femur, was easily chiselled off.

Dr. Meyer said the growth had probably existed longer than the time stated by the patient. Recovery was uneventful, and with perfect use of the leg.

SEVERE LACERATION OF THE ABDOMINAL WALL.

DR. CHARLES H. PECK presented a man, thirty-four years of age, who was admitted to Roosevelt Hospital on March 23, 1904, in the service of Dr. Robert F. Weir. About an hour previous to his admission, while working in front of an anvil in an automobile repair shop, an automobile was accidentally started, striking him in the back with great force, and shoving his abdomen against the point of the anvil. He immediately felt very faint, but did not lose consciousness, and was brought to the hospital without delay in an automobile.

On admission, the patient was in moderate shock. Over the left, lower quadrant of the abdomen there was a soft mass, apparently consisting of coils of intestine lying just beneath the skin. Peristaltic movements could be seen and felt. The mass was tympanitic on percussion and could not be easily reduced. The abdominal walls were soft; there was no rigidity. Evidences of contusion of the skin extended as low as Poupart's ligament and the saphenous opening, but there was no wound nor tear of the skin. Pulsation was absent in the left femoral, popliteal, and posterior tibial arteries, but the leg was warm.

Operation, under ether, two and one-half hours after receipt of the injury. A six-inch oblique incision was made midway between the umbilicus and the iliac spine. Immediately underneath the skin, which was avulsed over the entire left lower quadrant of the abdomen from the level of the umbilicus to Poupart's ligament, lay a mass consisting of coils of undistended intestine. There was a complete transverse tear of the entire structure of the abdominal wall beneath the skin, including the peritoneum, from the inner third of the right rectus muscle to the left, to about the anterior-axillary line, the torn structures being the inner third of the right rectus, with its sheath, the linea alba, the entire left rectus and sheath, the external and internal oblique and transversalis, with the peritoneum for a corresponding distance. There was no injury to the intestines or other viscera.

There was a hæmatoma in the left iliac fossa, with a small tear in the retroperitoneum near the pelvic brim.

The posterior peritoneum was incised over the hæmatoma and the common and external iliac arteries exposed; pulsation was normal in the common and internal iliac arteries, much diminished at the commencement of the external iliac, and absent at the level of Poupart's ligament. No injury of the external coat of the artery could be made out; the veins were uninjured. There was a complete transverse rupture of the left psoas muscle, with a separation of its ends of from one and one-half to two inches; the left ureter and the anterior crural nerve lay exposed in the gap, but were uninjured.

No attempt was made to suture the psoas muscle. The posterior peritoneum was sutured and a cigarette drain placed extra-peritoneally in the depth of the wound. The anterior peritoneum was then sutured with plain catgut; then the muscles and fascia, layer by layer, with No. 2 chromic gut; the skin was closed with silkworm gut and silk and a dry sterile dressing applied.

The patient made an uninterrupted recovery. The drain was removed on the third day and not replaced. The skin sutures were removed on the seventh day. The wound healed by primary union; the patient was allowed to sit up on the twenty-fifth day, and was discharged, cured, two days later. Pulsation returned in the femoral and posterior tibial arteries about a week after the operation. The limb was never cold nor cyanosed.

DR. HARTWELL, in discussing the possibility of a traumatic aneurism occurring in this case, on account of the contusion to the intima of the external iliac artery, said that last summer he made a number of experiments on animals, and the results were of some interest as bearing on this subject. A needle was inserted through the coats of the artery, and its inner wall scratched with the point of the instrument. The artery was then suspended and subjected to pressure from the inside by a fluid column; and it was demonstrated that a vessel thus irritated would become dilated with a much less pressure than one that had not been subjected to injury.

RETROPERITONEAL ABSCESS.

DR. JOHN A. HARTWELL presented a colored boy, eighteen years old, who was admitted to the Lincoln Hospital on the 21st

of February, 1904. His family history was unimportant. The patient had had varicella in childhood, and five years ago, while living in Virginia, he had what was called "bilious intermittent fever," which lasted about three weeks. Last summer he had measles, and was ill for two weeks. Every winter he gets a "cold," accompanied by cough and mucopurulent expectoration. These attacks usually last several weeks, and then pass off. His appetite had always been good, but since last September there had been a gradual loss of endurance, although he had not noticed any loss in weight. His bowels had always been regular and he voided his urine normally. He rarely indulged in alcoholic stimulants; he was never injured; denied gonorrhœa and syphilis.

Four months ago the patient was suddenly seized with a sharp, cramp-like pain in the lower abdomen. Its point of greatest intensity was the umbilicus, and it did not radiate. The attack came on without apparent cause and was not accompanied by vomiting, constipation, diarrhœa, or other symptoms, but he thought his abdomen was slightly swollen at the time. The pain persisted about twelve hours, and after its disappearance the belly remained tender for three days. A similar attack occurred about six weeks later; this was milder than the first, lasting only about eight hours, and the belly remaining tender for about two days afterwards. The attack was relieved by taking a Seidlitz powder. No physician was called during either attack.

The patient remained perfectly well until February 17 of the present year, when he was again suddenly taken with a cramp-like, sharp pain in the lower abdomen, most marked over the umbilicus. This time the pain radiated into the left groin and the upper, anterior surface of the left thigh. He passed his urine with difficulty, and had a sharp pain in the posterior urethra on voiding. Four days later, when he was brought to the hospital, he said his bowels had not moved since the beginning of the attack. He was given a soap-suds enema, but with poor results.

Upon admission, the patient complained of pain in the lower abdomen. There was marked abdominal distention; there was considerable muscular rigidity, marked tenderness, and dulness from the left flank towards the umbilicus. Upon examination per rectum, the seminal vesicles were found to be greatly enlarged and exceedingly soft and tender. The patient's temperature was 102° F.; leucocyte count, 12,000; urine, normal. The case was regarded as one of probable tubercular peritonitis.

Operation, February 26, 1904. Under the influence of the anæsthetic, the abdominal muscles became relaxed; and, as the seat of the trouble seemed to be on the left side, where a distinct mass could now be felt, an incision was made over it. Upon exposing the peritoneum, a large retroperitoneal abscess cavity was revealed, which contained about fourteen ounces of thin, whitish pus. The abscess cavity could be followed down behind the sigmoid, and apparently communicated with the enlarged seminal vesicles below.

The wound was drained for a few days, and closed entirely in two weeks. The patient left the hospital, entirely well, less than three weeks after the operation. Six days after the operation, a rectal examination showed that the enlarged seminal vesicles had greatly decreased in size, and before the patient was discharged they were absolutely normal.

Dr. Hartwell said he did not know what, if any, relation the enlarged seminal vesicles had to the retroperitoneal abscess in this case, nor did he know the source of infection. The original theory that it was tubercular was probably wrong, from the fact that the wound healed so promptly and without a resulting sinus.

ACUTE TETANUS TREATED BY MEANS OF INTRANEURAL AND SPINAL INJECTIONS OF ANTITOXIN.

DR. JOHN ROGERS said that about two years ago certain experiments were carried out in the Pasteur Institute in Paris to illustrate the action of the tetanus poison. These experiments went to show that this particular poison exerted all its effects on the ganglia in the spinal cord. They also demonstrated that it could only reach the spinal cord through the motor nerves, and that its progress in these nerves depended on the integrity of the axis-cylinders.

Further experiments along this line demonstrated that the tetanus toxins could only reach the spinal cord through the motor nerves, and that in animals a fatal inoculation of the poison into one of the extremities could be checked by intraneural injections of tetanus antitoxin. It was shown that the poison could only travel centripetally in the motor nerves, and that it could not travel at all through the sensory nerves. It was also shown that if the poison was introduced directly into the spinal cord, tetanus

occurred within a few hours. Its only mode of entrance into the motor nerves was through the muscle-end apparatus.

The patient shown by Dr. Rogers was a boy, twelve years old, who on the 17th of March, 1904, received a shot-wound of the hand. The injury, which was inflicted by a toy pistol, was treated in some hospital, where a wet dressing was applied. Five days later his family physician removed a piece of gun-wad from the wound.

On April 1, about sixteen days after the receipt of the injury, the boy began to experience some difficulty in chewing. On the following day this difficulty increased, and his walk became peculiar. On Sunday, April 3, two days after the onset of his symptoms, he had a severe convulsion and complained of cramp-like pains. When Dr. Rogers saw the patient that night, the body was perfectly rigid; there was marked opisthotonus and every sign of acute tetanus. He immediately exposed the left brachial plexus, isolated each one of the nerves, and injected into each about five or ten minims of tetanus antitoxin. Altogether, about twenty minims were injected into these nerves. In addition to this, sixty minims were injected directly into the spinal cord.

The following morning the patient's muscles were somewhat relaxed, so that he was able to roll about in bed. His jaw, however, was still somewhat rigid, and it was decided to repeat the treatment. The wound in the axilla was reopened and an injection was made into one of the nerves of the brachial plexus, followed by a spinal injection.

On the following day, the rigidity of the muscles had entirely disappeared, and, with the exception of extreme weakness, the patient was very comfortable. From that time on he made an uninterrupted recovery.

DR. WILLY MEYER asked Dr. Rogers whether he thought the same good results would have been obtained by injecting the antitoxin into the subarachnoid space only, instead of into the spinal cord and brachial nerves; and if it made a difference whether the antitoxin travelled over the same route as the poison or not? The speaker recalled one case where recovery followed the injection of the antitoxin into the cord only, although others had reported failures after the same method.

DR. ROGERS said that, in making the spinal injections, it was important to scratch the cord or one or more of the nerve filaments



F. Tilden Brown's case of benign gastric ulcer (posterior wall). Drawing presents the peritoneal aspect of the tissues and ulcer excised.

with the point of the needle, so that the antitoxin would enter the cord. Simple injection into the subarachnoid space without making any abrasion of the cord itself was of no more value than if it were injected subcutaneously. Injecting it into the ventricle of the brain was absolutely valueless, as the experiments mentioned before proved that the toxin could not diffuse downward, and all the facts known seem to show that the antitoxin follows the same paths.

In reply to a question as to whether his patient had received any treatment in addition to the injections of antitoxin, Dr. Rogers said he had been given sixty grains of bromide of sodium and thirty grains of chloral, in divided doses, on the second day of the disease. The delay in the onset of the acute symptoms in this case was probably due to the site of the inoculation of the poison.

Dr. Rogers said that while the inoculations into the brachial nerves might have been sufficient, he did not feel confident enough of that fact to omit the injections into the spinal cord. In cases where he injected the spinal cord only, the patients had died.

THE USE OF ELECTRICITY IN SKIN-GRAFTING.

DR. JOHN D. RUSHMORE read a paper with the above title, for which see page 404.

A POSTERIOR WALL GASTRIC ULCER.

DR. F. TILDEN BROWN said that, by the courtesy of Dr. F. H. Markoe, he had the opportunity to show an autopsy specimen revealing what followed an operation of his own done three years previously, at Trinity Hospital, for a perforating gastric ulcer. Six weeks after the operation the patient appeared to be well, and he was presented before the Society at its February meeting in 1899. Gradually gastric symptoms recurred and on September 28, 1902, he entered the New York Hospital with symptoms of pyloric obstruction, for which a gastrojejunostomy was done. He died five days later. At autopsy the site of the original gastric ulcer showed much nearer the pylorus than was expected, and the intestine originally found adherent to the margin of and occluding the ulcer was pretty certainly the transverse portion of the duodenum.

At the speaker's operation, an incision between ensiform and umbilicus revealed a mass behind the stomach. Access was had

to it through the gastrocolic omentum. The stomach was drawn out and turned upward after separating the adherent duodenum, when a one and a quarter inch by three-quarters inch ulcer was exposed on its posterior wall. Surrounding induration required excision of tissue, shown in the drawing. The muscular coats were approximated with two layers of chromic gut suture and the serous coat with two of silk. Then a strip of sterile gauze was laid over the suturing and the stomach turned back. This aim to provide for existing or subsequent soiling was an error, and probably explains both the considerable diverticulum seen in the specimen, and which in time led to the necessity for a second operation. For after the first this strip of gauze was gotten out only after very considerable traction made at each subsequent dressing, and in its semicircular wrapping of the stomach it is quite probable that the gradual traction tore apart the gastric wound; but immediate agglutinating contact of the left lobe of the liver and pancreas prevented escape of gastric contents, and the excavations in these viscera, as is now shown in the specimen, continued to act as the limiting walls of a constantly increasing cul-de-sac which in turn exerted sufficient pressure upon the pylorus as to all but occlude it.

That part of the post-mortem notes of most interest is as follows: Firstly, in connection with the last operation under the caption, "Intestines." At a point seventy-three centimetres from its origin, the jejunum is attached to the posterior wall of the pyloric end of the stomach, and communication between the two is established by means of a Murphy button. There is no leakage at the point of anastomosis. The loop of jejunum between origin and point of anastomosis hangs downward a distance of about fifteen centimetres into the left iliac region. It is hyperæmic and distended with fluid of fæces to a diameter of five centimetres.

Stomach. The stomach is not apparently enlarged; its measurements are thirty-three centimetres along the greater curvature and ten centimetres along the lesser curvature. Corresponding to the adhesion of the left lobe of the liver to the stomach there is a large, old ulcer just a little to the left of the pylorus. It measures one and one-fourth by two centimetres in the long axis of the stomach and five centimetres in the opposite direction. The edge of the ulcer is but slightly indurated, deeply undermined and rounded, quite smooth, and appears to have a covering of mucous

membrane. The entire thickness of the stomach is destroyed over the whole ulcerated area. The base of the ulcer being formed by dense fibrous tissue which is firmly attached to the pancreas and left lobe of the liver. The cavity resulting from this ulceration measures $7 \times 3 \times 2$ centimetres. The ulcer involves the lesser curvature and a little more of the posterior than of the anterior wall. The long measurement being at right angles to the long axis of the stomach. The posterior wall of the pylorus is thickened to the extent of one centimetre, and forms part of the wall of the ulcer. The pyloric orifice appears as a vertical slit-like opening which can be forcibly enlarged, but under natural conditions would probably interfere materially with the passage of food. The inferior portion of the pyloric end of the stomach pouches to the right of the pylorus about two and one-half centimetres (and it is into this pouch that the anastomosis was made), a little below and to the right of the pylorus.

Microscopic examination. The thickening of the pylorus is due to an abundance of racemose gland tissue and increase of fibrous tissue in submucous and muscular layers. Mucous membrane at the edge of ulcer is inflamed, but there is no evidence of malignancy.